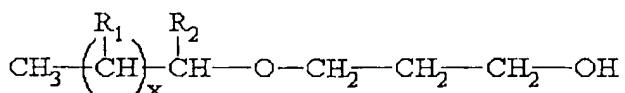


Rule 126 amendment \$8 second set of numbers (40, 41 to 54)
Please read (Changed to 42-56)
WE CLAIM: see inside

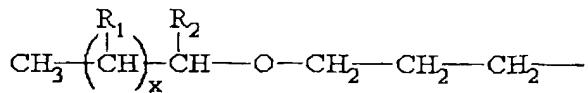
1. A branched alcohol composition comprising
a branched ether primary alcohol represented by the
formula:



wherein R_1 represents hydrogen or a hydrocarbyl radical having from 1 to 3 carbon atoms, R_2 represents a hydrocarbyl radical having from 1 to 7 carbon atoms, x is a number ranging from 0 to 16, wherein the total number of carbon atoms in the alcohol ranges from 9 to 24.

2. The branched alcohol composition of claim 1 wherein R_2 is a hydrocarbyl radical having 1 carbon atom.
3. The branched alcohol composition of claim 2 wherein R_1 is hydrogen.
4. The branched alcohol composition of claim 1 wherein x is a number ranging from 3 to 13.
5. An alkyl ether sulfate composition comprising an alkyl ether sulfate represented by the formula:

XOSO_3M , wherein M is hydrogen or a cation, and X is represented by the formula



wherein R_1 represents hydrogen or a hydrocarbyl radical having from 1 to 3 carbon atoms, R_2 represents a hydrocarbyl radical having from 1 to 7 carbon atoms, x is a number ranging from 0 to 16, wherein the total number of carbon atoms in the alkyl ether sulfate ranges from 9 to 24.

6. The alkyl ether sulfate composition of claim 5 wherein M is hydrogen.

7. The alkyl ether sulfate composition of claim 5 wherein M is a cation effective to provide a water soluble alkyl ether sulfate composition.

8. The alkyl ether sulfate composition of claim 7 wherein M is selected from the group consisting of ammonium, alkanolammonium, monovalent metal cations, and polyvalent metal cations.

9. The alkyl ether sulfate composition of claim 5 wherein R_2 is a hydrocarbyl radical having 1 carbon atom.

10. The alkyl ether sulfate composition of claim 9 wherein R_1 is hydrogen.

11. The alkyl ether sulfate composition of claim 5 wherein x is a number ranging from 3 to 13.

12. The alkyl ether sulfate composition of claim 6 wherein R_2 is a hydrocarbyl radical having 1 carbon atom.

13. The alkyl ether sulfate composition of claim 12 wherein R_1 is hydrogen.

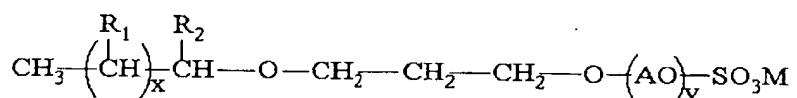
14. The alkyl ether sulfate composition of claim 6 wherein x is a number ranging from 3 to 13.

15. The alkyl ether sulfate composition of claim 7 wherein R₂ is a hydrocarbyl radical having 1 carbon atom.

16. The alkyl ether sulfate composition of claim 15 wherein R₁ is hydrogen.

17. The alkyl ether sulfate composition of claim 7 wherein x is a number ranging from 3 to 13.

18. An alcohol alkoxy sulfat ecomposition comprising an alcohol alkoxy sulfate represented by the formula:

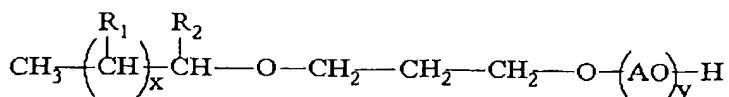


wherein R₁ represents hydrogen or a hydrocarbyl radical having from 1 to 3 carbon atoms, R₂ represents a hydrocarbyl radical having from 1 to 7 carbon atoms, x is a number ranging from 0 to 16, A is an alkylene radical having carbon number in the range of 2 to 4, y is a number ranging from 1 to 9, wherein the total number of carbon atoms in the alcohol alkoxy sulfate excluding A ranges from 9 to 24, and M is hydrogen or a cation.

19. The alcohol alkoxy sulfate composition of claim 18 wherein A is an alkylene radical having carbon number in the range of 2 to 3.

20. The alcohol alkoxyulfate composition of claim 19 wherein A is an alkylene radical having carbon number of 2.
21. The alkyl ether sulfate composition of claim 18 wherein M is hydrogen.
22. The alkyl ether sulfate composition of claim 18 wherein M is a cation effective to provide a water soluble alkyl ether sulfate composition.
23. The alkyl ether sulfate composition of claim 22 wherein M is selected from the group consisting of ammonium, alkanolammonium, monovalent metal cations, and polyvalent metal cations.
24. The alkyl ether sulfate composition of claim 18 wherein R₂ is a hydrocarbyl radical having 1 carbon atom.
25. The alkyl ether sulfate composition of claim 24 wherein R₁ is hydrogen.
26. The alkyl ether sulfate composition of claim 18 wherein x is a number ranging from 3 to 13.
27. The alkyl ether sulfate composition of claim 20 wherein R₂ is a hydrocarbyl radical having 1 carbon atom.
28. The alkyl ether sulfate composition of claim 27 wherein R₁ is hydrogen.
29. The alkyl ether sulfate composition of claim 20 wherein x is a number ranging from 3 to 13.

30. A branched alkanol alkoxylate composition comprising an alkanol alkoxylate represented by the formula:



wherein R_1 represents hydrogen or a hydrocarbyl radical having from 1 to 3 carbon atoms, R_2 represents a hydrocarbyl radical having from 1 to 7 carbon atoms, x is a number ranging from 0 to 16, A is an alkylene radical having carbon number in the range of 2 to 4, y is a number ranging from 1 to 9, wherein the total number of carbon atoms in the alkanol alkoxylate excluding A ranges from 9 to 24.

31. The branched alkanol alkoxylate composition of claim 30 wherein A is an alkylene radical having carbon number in the range of 2 to 3.

32. The branched alkanol alkoxylate composition of claim 31 wherein A is an alkylene radical having carbon number of 2.

33. The branched alkanol alkoxylate composition of claim 30 wherein R_2 is a hydrocarbyl radical having 1 carbon atom.

34. The branched alkanol alkoxylate composition of claim 33 wherein R_1 is hydrogen.

35. The branched alkanol alkoxylate composition of claim 30 wherein x is a number ranging from 3 to 13.

36. The branched alkanol alkoxylate composition of claim 32 wherein R₂ is a hydrocarbyl radical having 1 carbon atom.

37. The branched alkanol alkoxylate composition of claim 36 wherein R₁ is hydrogen.

38. The branched alkanol alkoxylate composition of claim 32 wherein x is a number ranging from 3 to 13.

39. A detergent composition comprising the alkyl ether sulfate composition of claim 5.

40. A detergent composition comprising the alkyl ether sulfate composition of claim 6.

41. A detergent composition comprising the alkyl ether sulfate composition of claim 7.

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42. A detergent composition comprising the alkyl ether sulfate composition of claim 9.

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41. A detergent composition comprising the alkyl ether sulfate composition of claim 11.

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42. A detergent composition comprising the alcohol ethoxysulfate composition of claim 18.

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43. A detergent composition comprising the alcohol ethoxysulfate composition of claim 20.

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44. A detergent composition comprising the alcohol ethoxysulfate composition of claim 22.

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45. A detergent composition comprising the alcohol ethoxysulfate composition of claim 24.

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46. A detergent composition comprising the alcohol ethoxysulfate composition of claim 26.

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47. A detergent composition comprising the alkanol alkoxylate composition of claim 30.

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48. A detergent composition comprising the alkanol alkoxylate composition of claim 32.

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49. A detergent composition comprising the alkanol alkoxylate composition of claim 33.

52
50. A process to produce a branched alcohol composition comprising:

contacting an olefin having an average carbon number in the range of 3 to 18 with 1,3-propane diol in the presence of a catalyst effective to react the olefin with the diol under conditions effective to produce the branched alcohol composition.

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51. The process of claim 50 wherein the catalyst is an acid catalyst.

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52. The process of claim 51 wherein the average carbon number of the olefin is in the range of 6 to 18.

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53. The process of claim 51 wherein the diol and olefin is contacted at a temperature within the range of from 50 °C to 250 °C.

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56)
54. A process to produce a branched alkyl ether sulfate composition comprising:

- a) contacting an olefin having an average carbon number in the range of 3 to 18 with 1,3-propane diol in the presence of a catalyst effective to react the olefin with the diol thereby producing a branched alcohol composition; and
- b) contacting the branched alcohol composition with a sulfating agent under conditions effective to produce a branched alkyl ether sulfate composition.